

#### VOLVO CAR CORPORATION

**EXECUTIVE ORDER A-018-0132** New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

Pursuant to the authority vested in the Air Resources Board by Health and Safety Code (HSC), Div. 26, Part 5, Chap. 2; and pursuant to the authority vested in the undersigned by HSC Sections 39515 & 39516 and Executive Order G-02-003;

## IT IS ORDERED AND RESOLVED:

That the following exhaust and evaporative emission control systems produced by the manufacturer are certified as described below. Production vehicles shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	TEST GROUP	VEHICLE TYPE	EXHAUST EMISSION STANDARD CATEGORY	USEFU (mi		IN- COMP (*=N/A or A/E=ex	MEDIATE USE LIANCE full in-use; h. / evap. iate in-use)	FUEL TYPE			
2005	5VVXV02.4U2N	Passenger Car	"LEV II" Ultra Low Emission Vehicle (LEV II	EXH / ORVR	EVAP	EXH	EVAP	0			
			ULEV)	120K	150K	Α	Ε	Gasoline			
No.	ECS & S	SPECIAL FEATURES	EVAPORATIVE	EVAPORATIVE FAMILY (EVAF)			DISPLACEMENT (L)				
1	TWC, HAF	FS, HO2S, SFI, OBD(F)		5VVXR0130EV2				(2)			
•		*	5VVXR0	5VVXR0132EV2				2.4			
*		•	*	•							
*		*	*	*							

See the Attachment for Vehicle Models, Evaporative Family, Engine Displacement, Emission Control Systems, Phase-In Standards, OBD Compliance, Emission Standards and Certification Levels, and Abbreviations.

## BE IT FURTHER RESOLVED:

That the exhaust and the evaporative emission standards and the certification emission levels for the listed vehicles are as listed on the Attachment. Compliance with the 50° Fahrenheit testing requirement may have been met based on the manufacturer's submitted compliance plan in lieu of testing. Any debit in the manufacturer's "NMOG Fleet Average" (PC or LDT) or "Vehicle Equivalent Credit" (MDV) compliance plan shall be equalized as required.

## **BE IT FURTHER RESOLVED:**

That for the listed vehicle models, the manufacturer has attested to compliance with Title 13, California Code of Regulations, (13 CCR) Sections 1965 [emission control labels], 1968.2 [on-board diagnostic, full or partial compliance], 2035 et seq. [emission control warranty], 2235 [fuel tank fill pipes and openings] (gasoline and alcohol fueled vehicles only), and "High-Altitude Requirements" and "Inspection and Maintenance Emission Standards" (California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model PC, LDT and MDV).

Vehicles certified under this Executive Order shall conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this Executive Order.

Executed at El Monte, California on this 10th day of June 2004.

llen Jons, Chief

Mobile Source Operations Division

New Passenger Cars, Light-Duty Trucks and Medium-Duty Vehicles

# **ATTACHMENT**

# EXHAUST AND EVAPORATIVE EMISSION STANDARDS AND CERTIFICATION LEVELS

(For bi-, dual- or flexible-fueled vehicles, the STD and CERT in parentheses are those applicable to testing on gasoline test fuel.)

AVERAGE [g/mi] CI			@ RAF=* RAF = *	NMOG or							ydrocarbon;	CO=carbon or; 2/3 D [g/te	monoxide; N	Ox=oxides	of nitrogen
CERT	STD	NMOG CERT	NMHC CERT	NMHC	mi=mile; l	<=1000 mile	s: F=degree	es Fahrenh	eit; SFTP=	supplemer	ooard refuel tal federal to	ing vapor red est procedure		am; mg=mill	igram
0.024 0.040		[g/mi]	[g/mi]	[g/mi]	CO [g/mi]		NOx [g/mi]		Н	CHO [m	g/mi]	PM [g/mi]		Hwy NOx [g/mi]	
S-Approximate	@ 50K	0.033	<del>                                     </del>	0.040	CERT	STD	CER			RT	STD	CERT	STD	CERT	STD
			<del>                                     </del>	0.040	0.4	1.7	0.01	0.0	5	•	8.	*	*	0.002	0.07
deskill list over 18 mm.	@ UL	0.045	<u> </u>	0.055	0.6	2.1	0.01	0.0	7	•	11.	•	•	0.002	0.09
makha mara	@ 50°F & 4K	0.075	*	0.080	0.2	1.7	0.02	0.0	5	*	16.		•	*	*
CO [g/mi] @ 20°F & 50K				NMHC+NOx [g/mi] CO [g/ (composite) (compo			NMHC+NOx [g/mi] [US06]			[g/mi] JS06]	NMHC+NOx [g/mi] [SC03]		CO [g/mi] [SC03]		
			$1.51  \rm M_{\odot}$	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD	CERT	STD
ERT	1.6	SFTP @ 4000 miles		*	*		*	0.03	0.14	0.2	8.0	0.03	0.20	0.2	
STD	10.0	SFTP	@ * miles	*	*	*	*	*	•	*	+ +	*	*	*	2.7
Evaporative Family (9		3-Days Di (gram	urnal + Hot s/test) @ U	Soak L	2-Days Diurnal + Hot Soak (grams/test) @ UL		Running Loss (grams/mile) @ UL			On-Board Refueling Vapor Recovery (grams/gailon) @ UL					
		CERT	STD		CERT	CERT STD		CERT ST		STD		CERT		STD	
5VVXR0130EV2			0.43	0.	50	0.55	- 0	).65	0.01	ī —	0.05		0,11		
5	VVXR0132EV	2	0.31	0.9	50	0.32	-	),65	0.01		0.05				0.20
*		*								0.03	0.04		- 1	0.20	

\* = not applicable; UL=useful life; PC=passenger car; LDT=light-duty truck; MDV=medium-duty vehicle; ECS= Emission Control System; STD= Standard; CERT= Certification; LVW=loaded vehicle weight; ALVW=adjusted LVW; LEV=low emission vehicle; TLEV=transitional LEV; ULEV=utra LEV; SULEV=super ULEV; TWC=3-way catalyst; ADSTWC=adsorbing TWC; WU=warm-up catalyst; OC=oxidizing catalyst; O2S=oxygen sensor; HO2S=heated O2S; AFS/HAFS=air- fuel ratio sensor / heated AFS; EGR=exhaust gas recirculation; AIR=secondary air injection; PAIR=pulsed AIR; MFI= multiport fuel injection; SFI=sequential MFI; TBI=throttle body injection; DGI=direct gasoline fuel injection; TC/SC= turbo/super charger; CAC=charge air cooler; OBD (F)/(P)=full/partial on-board diagnostic; DOR=direct ozone reducing; prefix 2=parallel; (2) suffix=series; CNG/LNG=compressed/ilquefied natural gas; LPG=liquefied petroleum gas; E85="85%" Ethanol Fuel;

# 2005 MODEL YEAR: VEHICLE MODELS INFORMATION

MAKE	MODEL	EVAPORATIVE FAMILY	ECS NO.	ENGINE SIZE (L)	INTERMEDIATE IN-USE COMPLIANCE (*=N/A or full in-use; A/E=exh. / evap. intermediate in-use)		PHASE-IN STD.	OBD II
					EXH	EVAP		
VOLVO	S40 2.4i	5VVXR0132EV2	1	2.4	Α	E	SFTP	Full
VOLVO	V50 2.4i	5VVXR0132EV2	1	2.4	A	E	SFTP	Full
VOLVO	V70 FWD	5VVXR0130EV2	1	2.4	A	E	SFTP	Full
VOLVO	S60 FWD	5VVXR0130EV2	1	2.4	A	E	SFTP	Full